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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,564	07/08/2003	Yoshiaki Sakamoto	KIOI:030	9009
7590 ROSSI & ASSOCIATES P.O. BOX 826 ASHBURN, VA 20146-0826		12/18/2007	EXAMINER TUCKER, WESLEY J	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 12/18/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/615,564	Applicant(s) SAKAMOTO, YOSHIAKI	
	Examiner Wes Tucker	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,571,003 to Hillebrand et al.

With regard to claim 1, Hillebrand discloses ***a digital zoom skin diagnostic apparatus comprising:***

***a multi-pixel digital camera (13) that captures a high-resolution digital image of an entire face*** (column 3, lines 46-50 and Fig. 1, element 120, Hillebrand discloses a digital camera); and

***calculating means for cutting out image data of a processing region from the captured image data on the entire face to calculate skin parameters*** (column 6,

lines 13-43, Hillebrand discloses a method to determine sub-images of the original face image to perform analysis on individual regions of skin);

***wherein a size of the image data of the processing region is determined in advance according to respective calculation method of said skin parameters***

(column 7, lines 1-15, Hillebrand discloses automatically determining facial landmarks to determine sub-images. The landmarks are found with the aid of a mask template indicating the expected size and shape of an average face. This is interpreted as the size being determined in advance in accordance with skin parameters such as location of the nose, eyes, etc.)

With regard to claim 2, Hillebrand discloses ***a digital zoom skin diagnostic apparatus comprising:***

***a multi-pixel digital camera (13) that captures one high-resolution color image of an entire face*** (column 3, lines 46-50 and Fig. 1, element 120, Hillebrand discloses a digital camera. It is understood that a relatively high resolution digital camera would be required to examine images of pores and wrinkles); and

***calculating means for cutting out image data of a processing region from the captured image data on the entire face to calculate skin parameters*** (column 6, lines 13-43, Hillebrand discloses a method to determine sub-images of the original face image to perform analysis on individual regions of skin);

***wherein a size of the image data of the processing region is determined in advance according to respective calculation method of said skin parameters***  
(column 7, lines 1-15, Hillebrand discloses automatically determining facial landmarks to determine sub-images. The landmarks are found with the aid of a mask template indicating the expected size and shape of an average face. This is interpreted as the size being determined in advance in accordance with skin parameters such as location of the nose, eyes, etc.)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patents 6,571,003 to Hillebrand et al. and 6,993,167 to Skladnev et al.

With regard to claim 3, Hillebrand discloses ***a digital zoom skin diagnostic apparatus comprising:***

***a digital camera (13) capable of outputting large-sized data*** (column 3, lines 46-50 and Fig. 1, element 120, Hillebrand discloses a digital camera);

***control means for providing control such that said digital camera is operated to capture a high-resolution color image of an entire face of a person to be diagnosed*** (Fig. 1, element 106 and Fig. 7, Hillebrand discloses capturing an image of a face for analysis. The computing device in Fig. 1 is interpreted as the control means. It is understood that a relatively high resolution digital camera would be required to examine images of pores and wrinkles as depicted in Fig. 7);

***calculating means for setting a processing region in the captured image data on the entire face, cutting out image data of the processing region*** (column 6, lines 13-43, Hillebrand discloses sub-image determination for further processing of the facial portion. The calculating means is interpreted as the computing device 106 in Fig. 1), ***and performing processing on the image data of the respective processing regions to determine skin parameters*** (Fig. 3, steps 304 and 306, Hillebrand discloses processing the sub-images to determine skin analysis measurements); ***and***

***output means (15, 16) for outputting a skin parameter diagnosis result in which a digital image of the processing region is arranged*** (Fig. 3, steps 308 and Figs 10-14, Hillebrand discloses displaying the specified sub-image highlighted on the display of the face image).

Hillebrand does not explicitly disclose that the displayed digital image is a ***digital zoom image of the processing region***. Skladnev discloses a skin image analysis

method that allows for zooming images of skin portions (column 28, lines 57-67). The need to zoom in on any biological image for analysis exists for the reason of obtaining as much detail as possible. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to enable the image regions defined and analyzed by Hillebrand to be zoomed and enlarged as taught by Skladnev in order to obtain as much detail as possible of the skin area.

With regard to claim 4, Hillebrand discloses a digital zoom skin diagnostic apparatus comprising:

***a digital camera (13) capable of outputting large-sized data*** (column 3, lines 46-50 and Fig. 1, element 120, Hillebrand discloses a digital camera);

***control means for providing control such that said digital camera is operated to capture a high-resolution color image of an entire face of a person to be diagnosed*** (Fig. 1, element 106 and Fig. 7, Hillebrand discloses capturing an image of a face for analysis. The computing device in Fig. 1 is interpreted as the control means. It is understood that a relatively high resolution digital camera would be required to examine images of pores and wrinkles as depicted in Fig. 7);

***calculating means for setting a plurality of processing regions in the captured image data on the entire face, cutting out image data of the processing regions***, (column 6, lines 13-43, Hillebrand discloses sub-image determination for

further processing of the facial portion. The calculating means is interpreted as the computing device 106 in Fig. 1. Hillebrand also allows for the determination of more than one sub-image as seen in Fig. 3, steps 304-306), **and performing processing on the image data of the respective processing regions to determine skin parameters** (Fig. 3, steps 304 and 306, Hillebrand discloses processing the sub-images to determine skin analysis measurements);

**output means (15, 16) for outputting a skin parameter diagnosis result in which a digital image of the processing region is arranged** (Fig. 3, steps 308 and Figs 10-14, Hillebrand discloses displaying the specified sub-image highlighted on the display of the face image).

Hillebrand does not explicitly disclose that the displayed digital image is a **digital zoom image of the processing region**. Skladnev discloses a skin image analysis method that allows for zooming images of skin portions. Skladnev also teaches displaying multiple zooms of different regions as tiles on the display (column 28, lines 57-67). The need to zoom in on any biological image for analysis exists for the reason of obtaining as much detail as possible. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to enable the image regions defined and analyzed by Hillebrand to be zoomed and enlarged as taught by Skladnev in order to obtain as much detail as possible of the skin area.



With regard to claim 5, Hillebrand discloses ***a digital zoom skin diagnostic apparatus comprising:***

***regulating means (21, 22) for controlling a position and posture of a person to be diagnosed such that position and direction of a face of the person to be diagnosed are set to predetermined position and direction*** (Fig. 4, element 402 and column 3, lines 46-56, Hillebrand discloses a device used to position the subjects face in a preferred position for imaging)

***a digital camera (13) arranged so that an entire face of the person to be diagnosed is positioned within a field angle*** (Fig. 1, element 120, Fig. 7 and column 3, lines 46-50 and column 4, lines 56-67);

***control means responsive to a triggering operation by the person to be diagnosed, for providing control such that said digital camera (13) is operated to capture a high-resolution color image of the entire face*** (column 5, lines 4-14 and 43-46), Hillebrand discloses that the image is taken when an operator issues a command. The operator can be the person being analyzed according to Hillebrand. It is understood that an image used to study things like wrinkle and pores needs to have a relatively high resolution. The image acquired is in color, column 1, lines 60-65);

***calculating means for cutting out partial image data of a small display region from the captured image data on the entire face*** (column 6, lines 13-43 and Fig. 7, Hillebrand discloses a method to determine sub-images of the original face image to perform analysis on individual regions of skin);

***output means (15, 16) for outputting a digital image of the display region for the person to be diagnosed*** (Fig. 3, steps 308 and Figs 10-14, Hillebrand discloses displaying the specified sub-image highlighted on the display of the face image).

Hillebrand does not explicitly disclose that the displayed digital image is a ***digital zoom image of the processing region***. Skladnev discloses a skin image analysis method that allows for zooming images of skin portions. Skladnev also teaches displaying multiple zooms of different regions as tiles on the display (column 28, lines 57-67). The need to zoom in on any biological image for analysis exists for the reason of obtaining as much detail as possible. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to enable the image regions defined and analyzed by Hillebrand to be zoomed and enlarged as taught by Skladnev in order to obtain as much detail as possible of the skin area.

With regard to claim 6, Hillebrand discloses ***a digital zoom skin diagnostic apparatus comprising:***

***a digital camera (13) that captures a high-resolution color image of an entire face of a person to be diagnosed*** (Fig. 1, element 120, Fig. 7 and column 3, lines 46-50 and column 4, lines 56-67); and

***calculating means for capturing image data from said digital camera to calculate skin parameters*** (column 6, lines 13-43, Hillebrand discloses a method to determine sub-images of the original face image to perform analysis on individual regions of skin);

Hillebrand also ***discloses wherein image data of a processing region designated by a pointer on the image of the entire face is displayed on a monitor screen*** (Fig. 7 and column 6, lines 44-59, Hillebrand discloses allowing an operator to designate the image region by drawing with a pointer on the display).

Hillebrand does not disclose wherein the processing region ***is enlarged by digital-zooming and outputted in such a format that the enlarged image is arranged next to the image data of the entire face.***

Skladnev discloses a skin image analysis method that allows for zooming images of skin portions. Skladnev also teaches displaying multiple zooms of different regions as tiles on the display (column 27, lines 57-67). The need to zoom in on any biological image for analysis exists for the reason of obtaining as much detail as possible. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to enable the image regions defined and analyzed by Hillebrand to be zoomed and enlarged as taught by Skladnev in order to obtain as much detail as possible of the skin area. It would further be obvious to display the zoomed images next to the original image of the entire face disclosed by Hillebrand in order to give context for the zoom images in order to show where on the face they are located.

With regard to claim 7, the discussion of claim 6 applies in part. Skladnev discloses displaying different zoom regions as tiles or multiple image zooms of the same size (column 27, lines 57-67) and also discloses linking zoom images to a body or photo map showing where the zoom images are taken from (column 28, lines 35-62) and it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Hillebrand and Skladnev to display zoomed regions of skin portions simultaneously with the image of the entire face for reasons of showing context and mapping the individual zooms to the corresponding location on the original face image.

***Contact Information***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 571-272-7427. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Wes Tucker



12-7-07